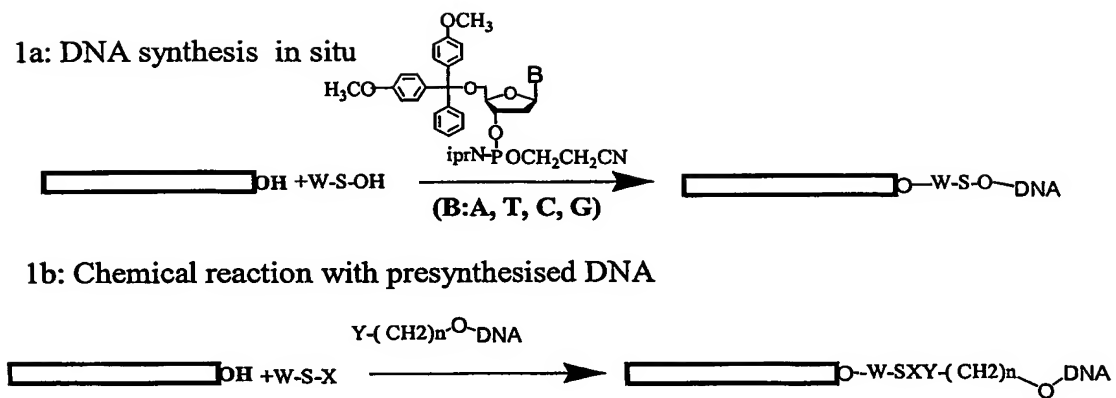


1/27

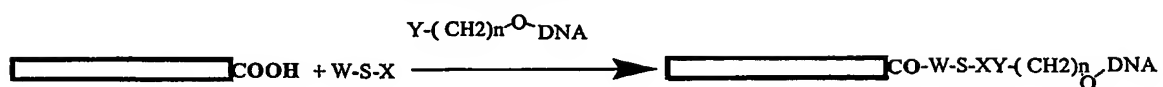


Scheme 1

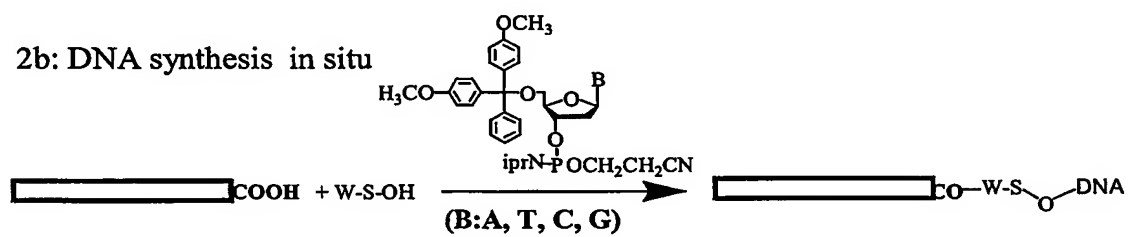
FIGURE 1

2/27

2a: Chemical reaction with presynthesised DNA



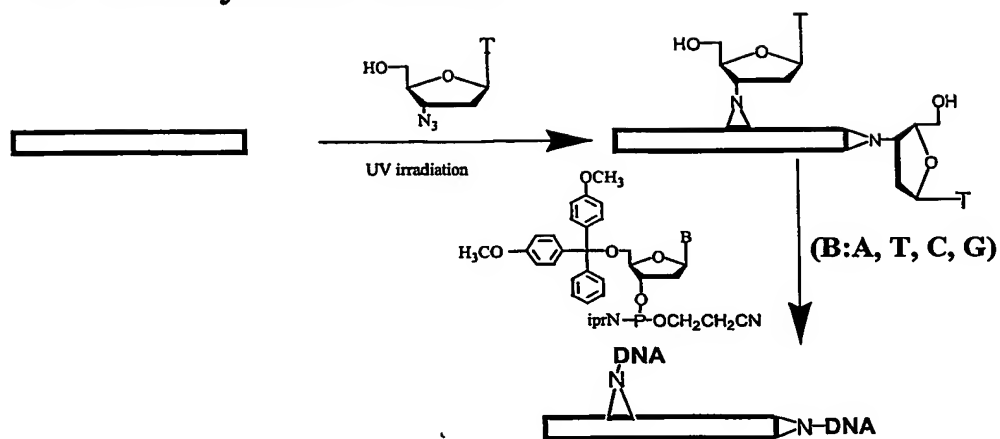
2b: DNA synthesis in situ



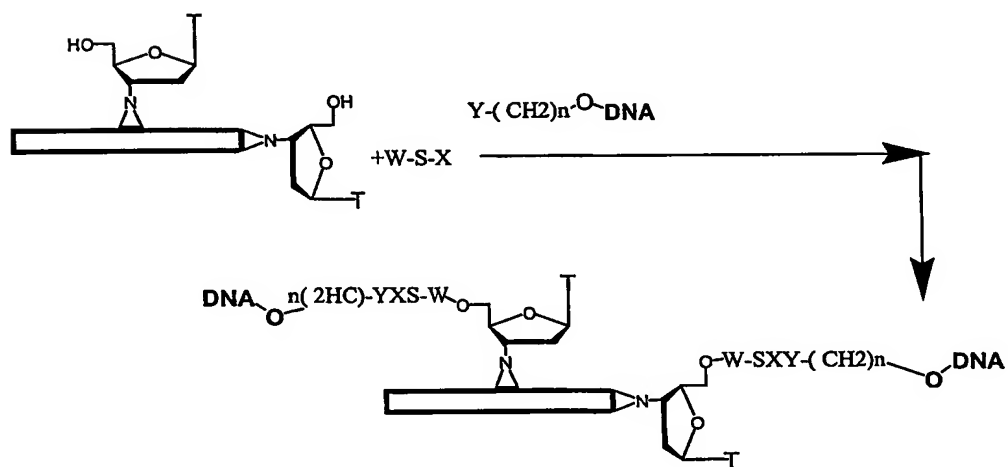
Scheme 2

FIGURE 2

3/27

3a: DNA synthesis *in situ*

3b: Chemical reaction with presynthesised DNA

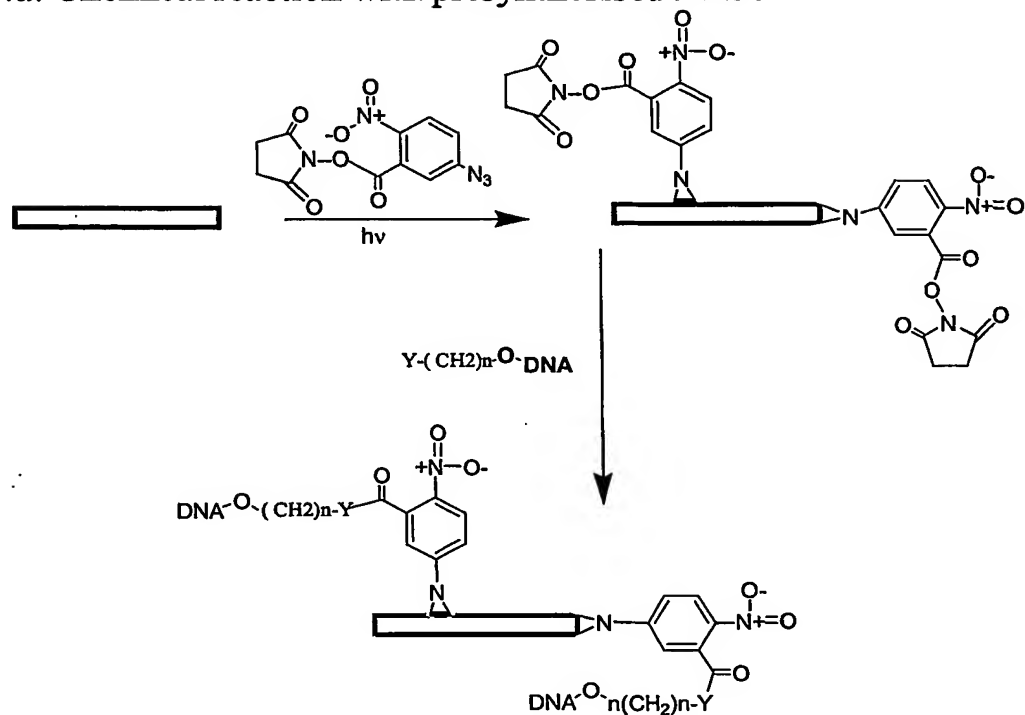


Scheme 3

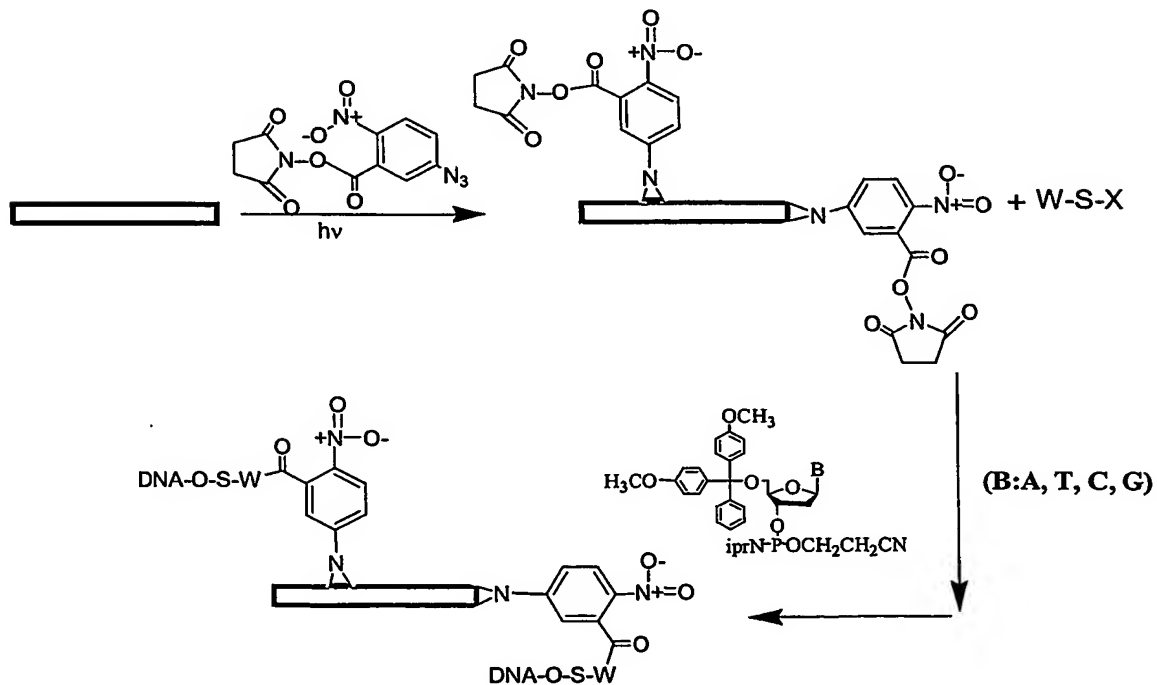
FIGURE 3

4/27

4a: Chemical reaction with presynthesised DNA



4b: In situ synthesis of DNA



Scheme 4

FIGURE 4

5/27

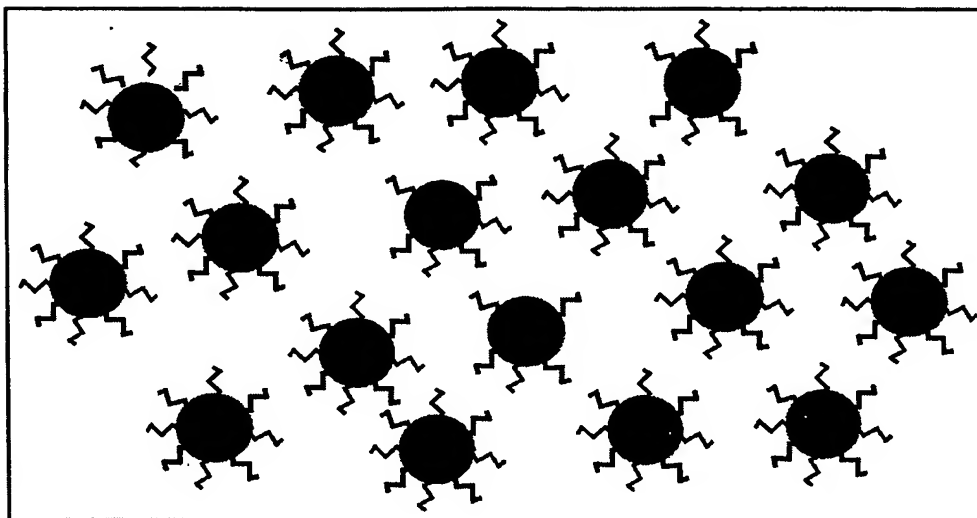
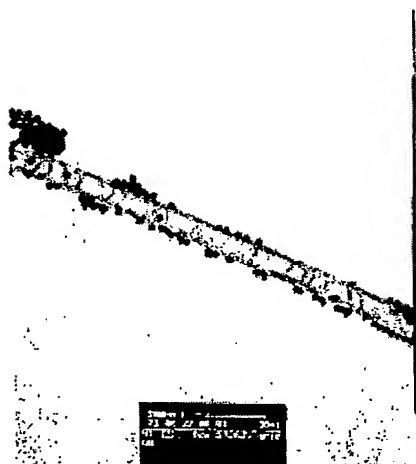
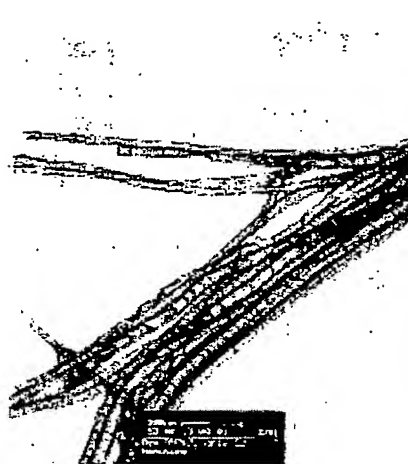


FIGURE 5

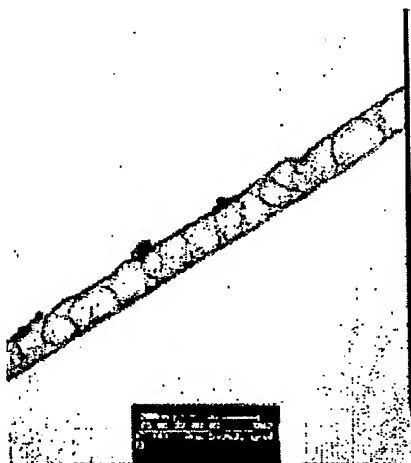
7/27



(a)



(b)



(c)

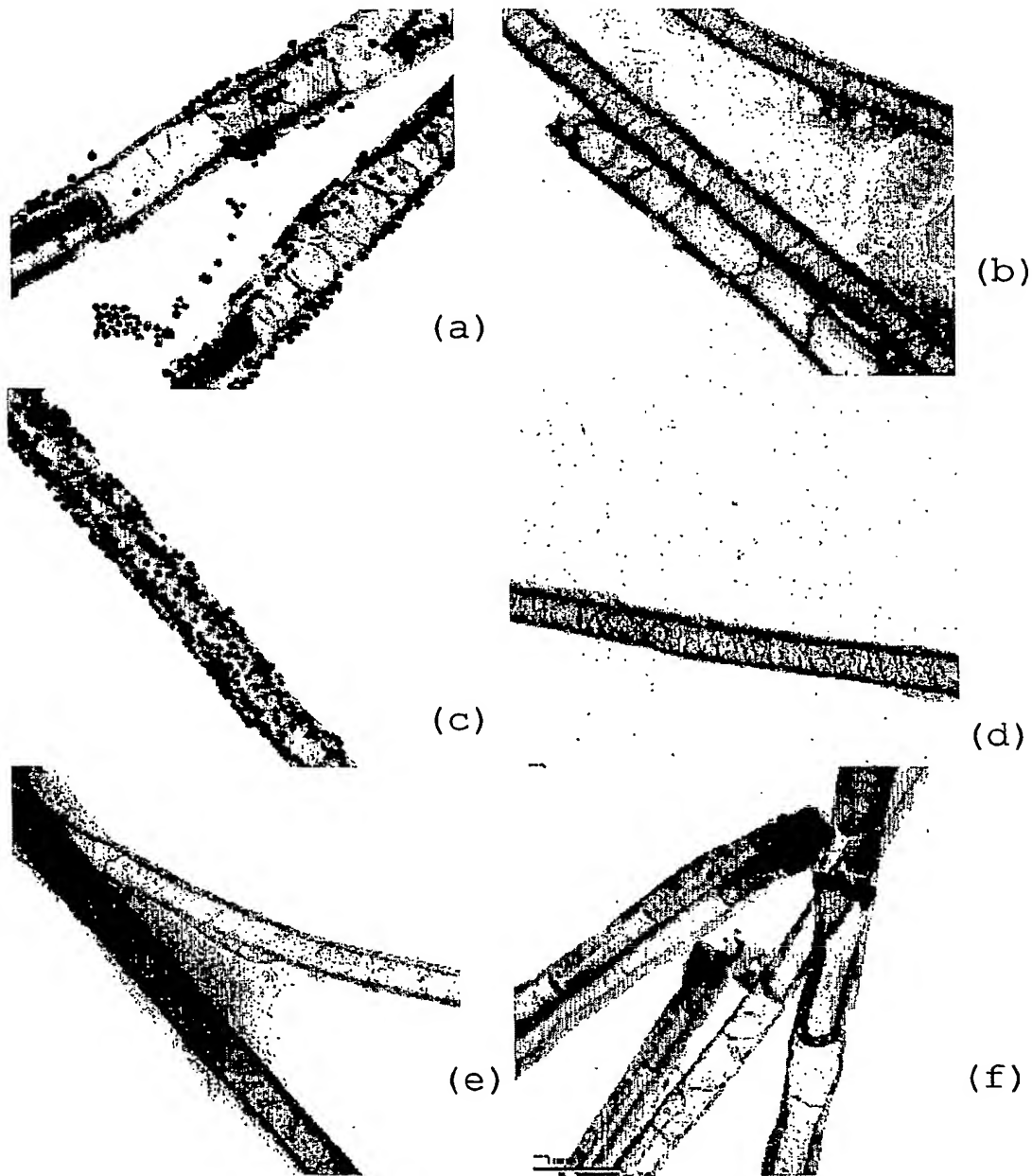


(d)

FIGURE 7

BEST AVAILABLE COPY

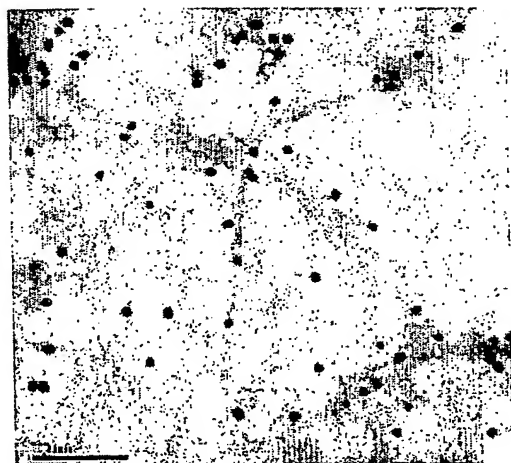
8/27



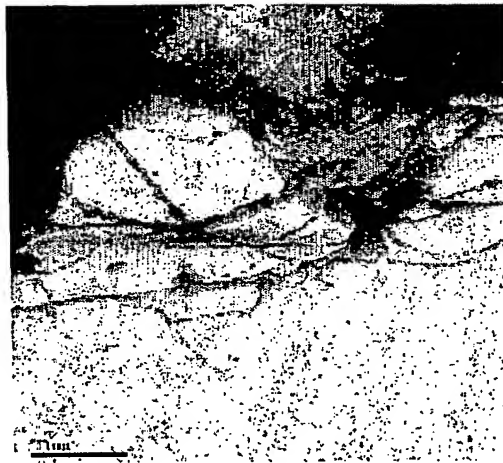
BEST AVAILABLE COPY

FIGURE 8

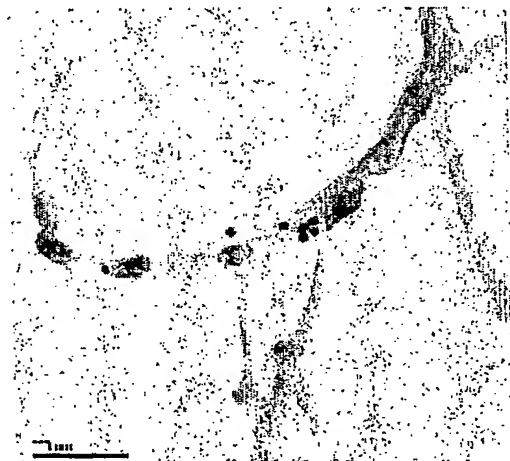
9/27



(a)



(b)



(c)

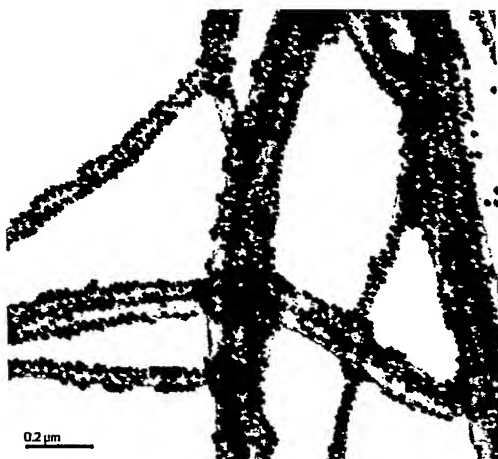


(d)

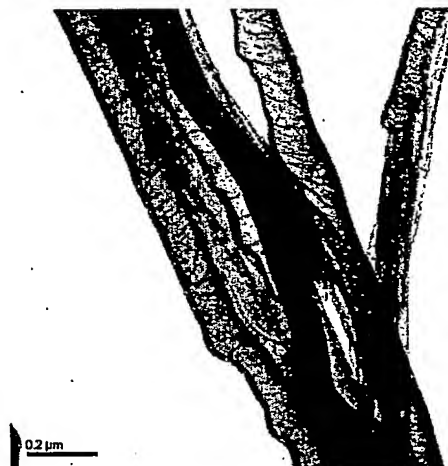
FIGURE 9

BEST AVAILABLE COPY

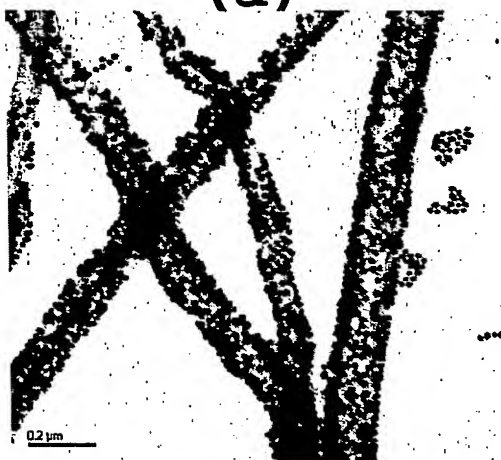
10/27



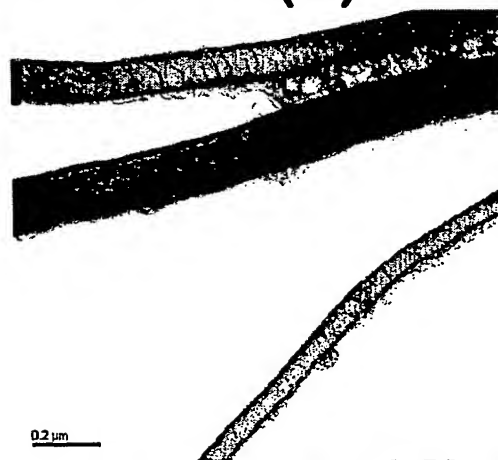
(a)



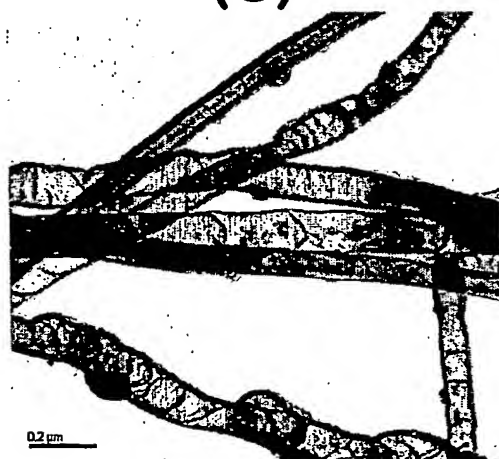
(b)



(c)



(d)



(e)



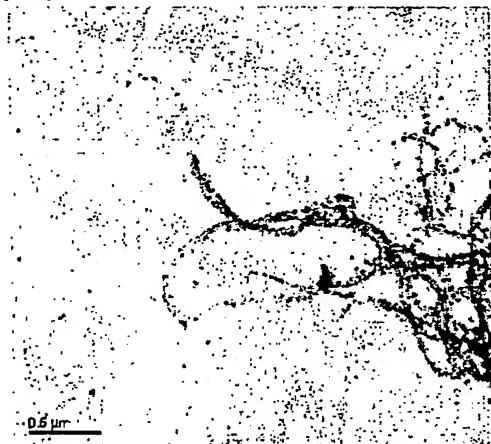
(f)

FIGURE 10

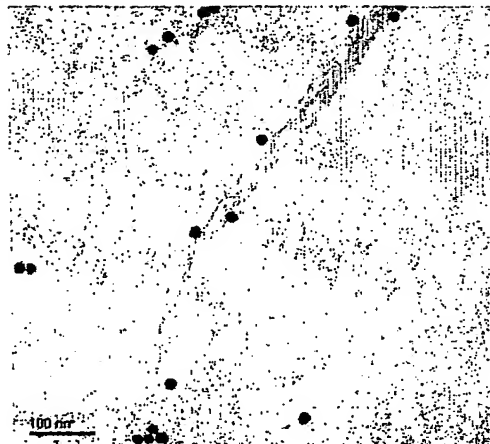
BEST AVAILABLE COPY

11/27

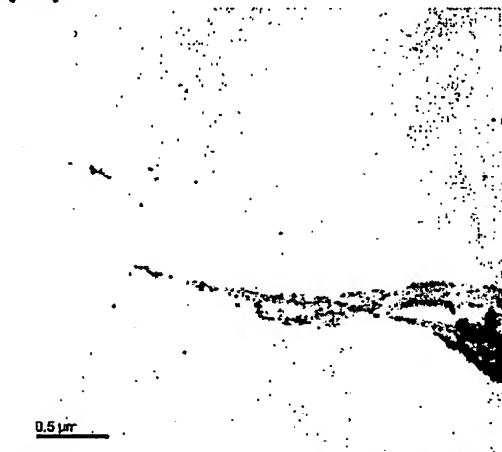
(a)



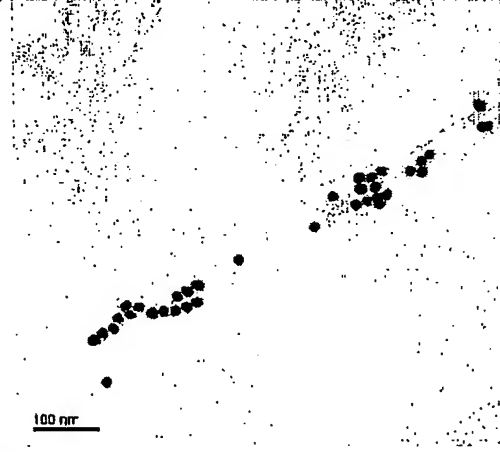
(b)



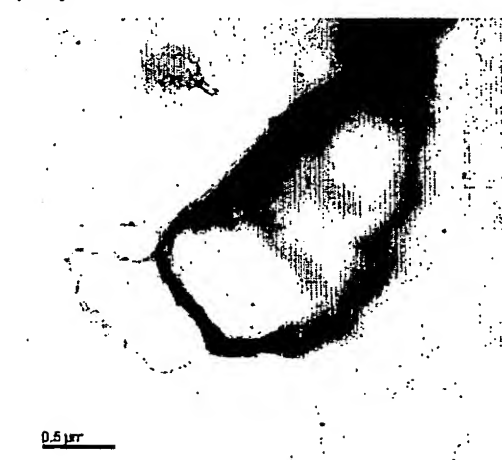
(c)



(d)



(e)



(f)

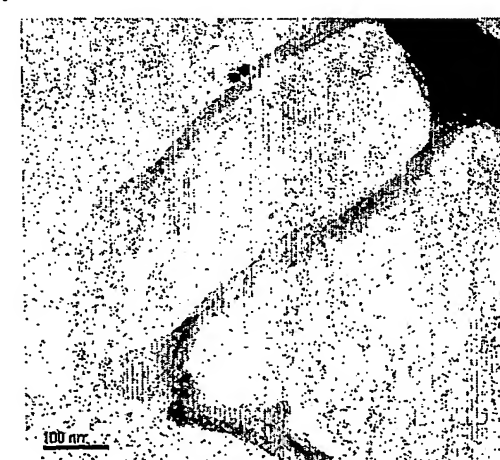
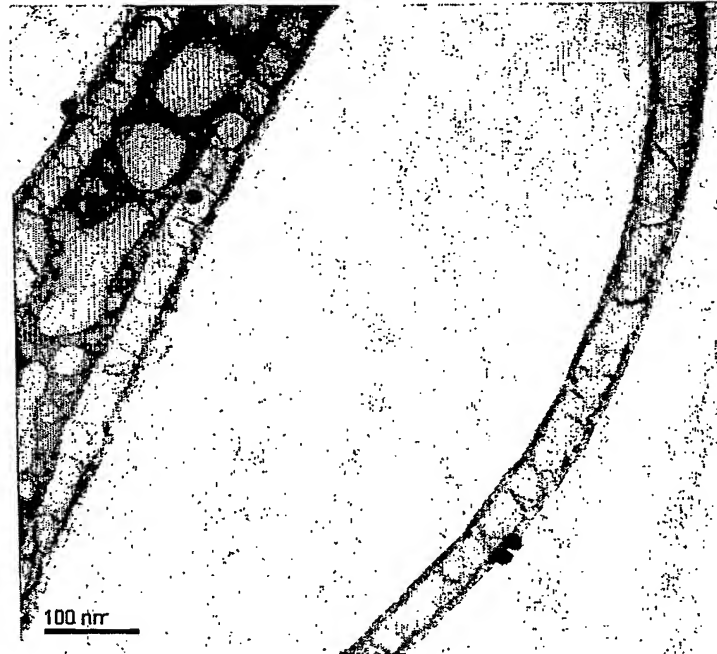


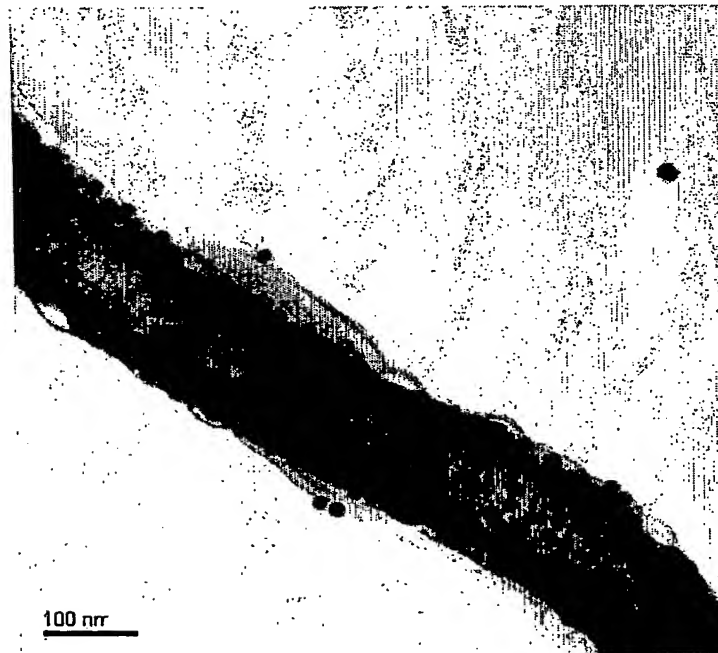
FIGURE 11

BEST AVAILABLE COPY

12/27



(a)



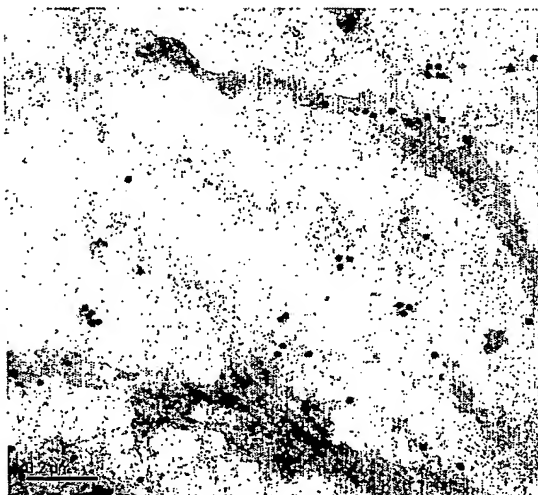
(b)

FIGURE 12

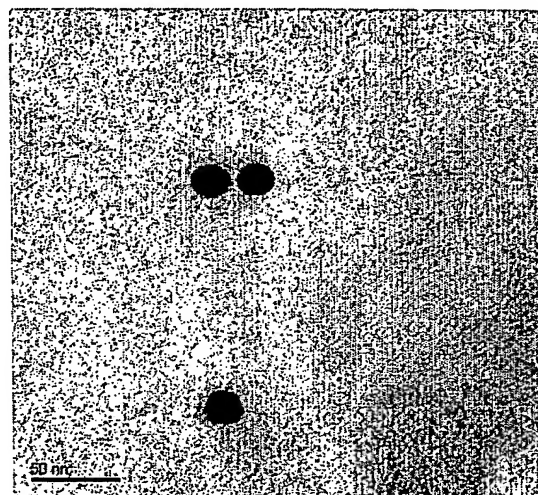
BEST AVAILABLE COPY

13/27

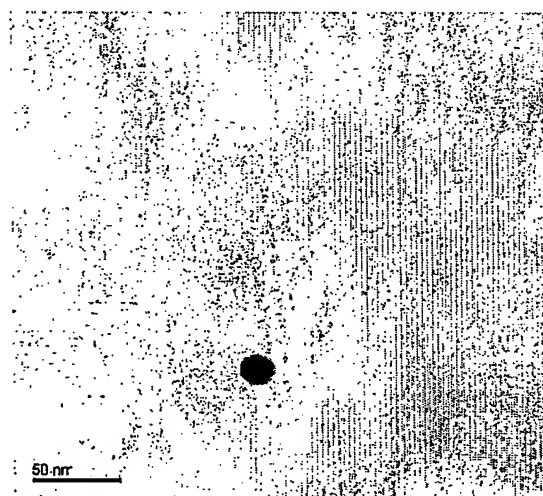
(a)



(b)



(c)



(d)



BEST AVAILABLE COPY

FIGURE 13

14/27

BEST AVAILABLE COPY

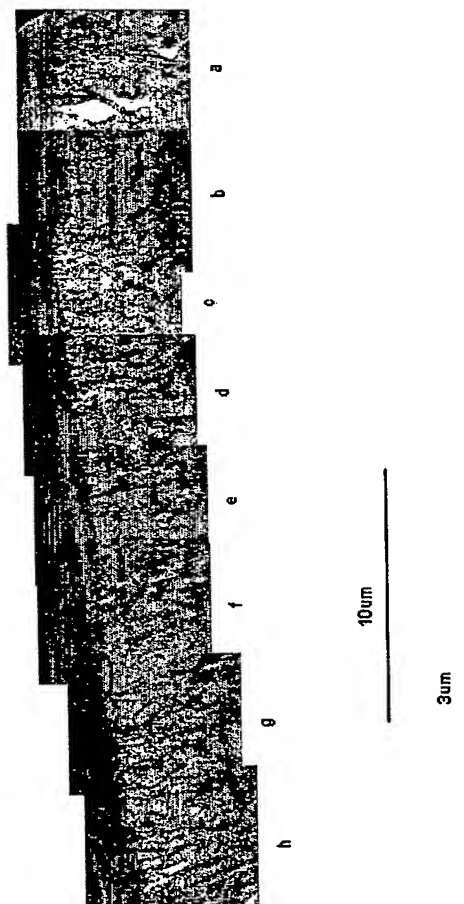
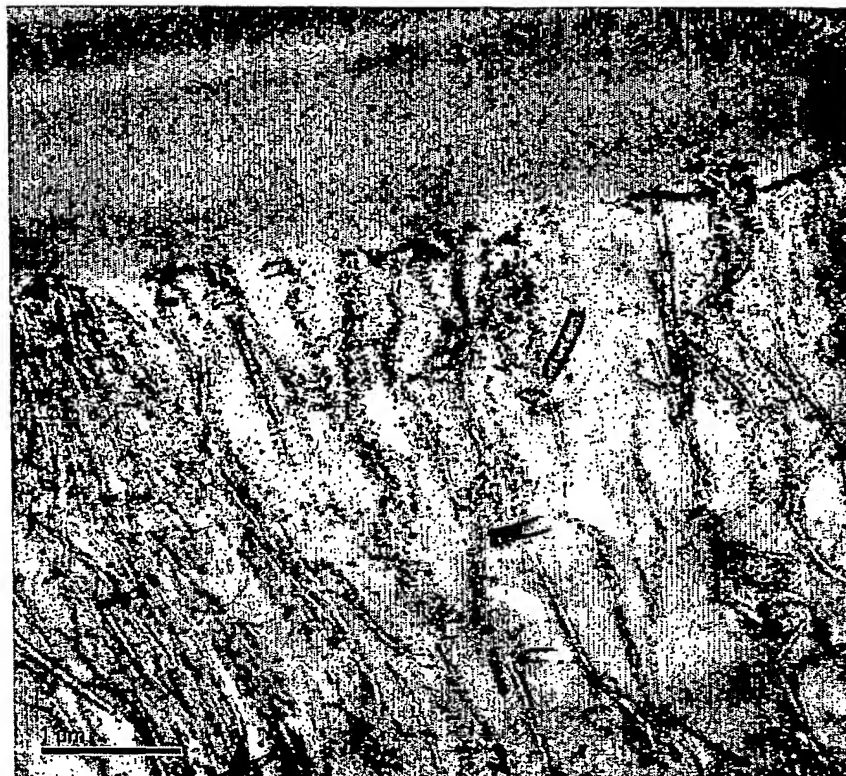


FIGURE 14A

15/27



BEST AVAILABLE COPY

FIGURE 14B

16/27

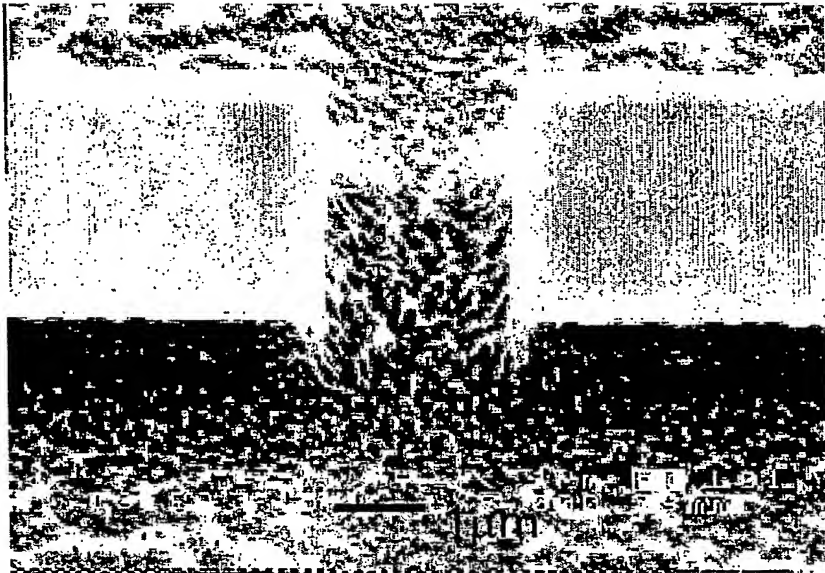
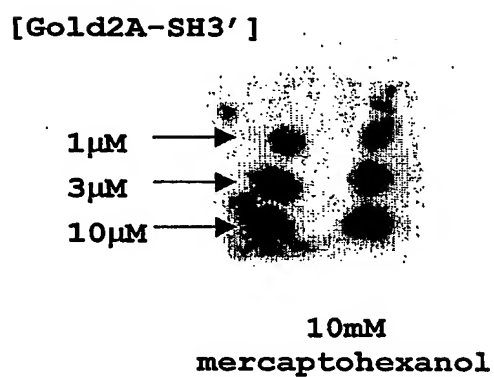
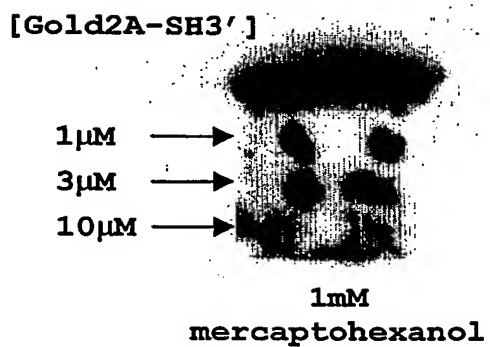


FIGURE 15

BEST AVAILABLE COPY

17/27



BEST AVAILABLE COPY

FIGURE 16A

18/27

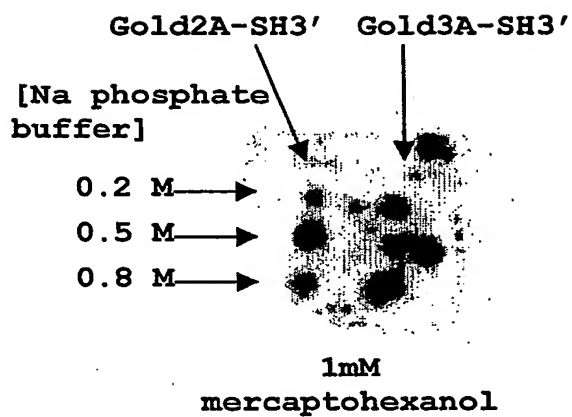
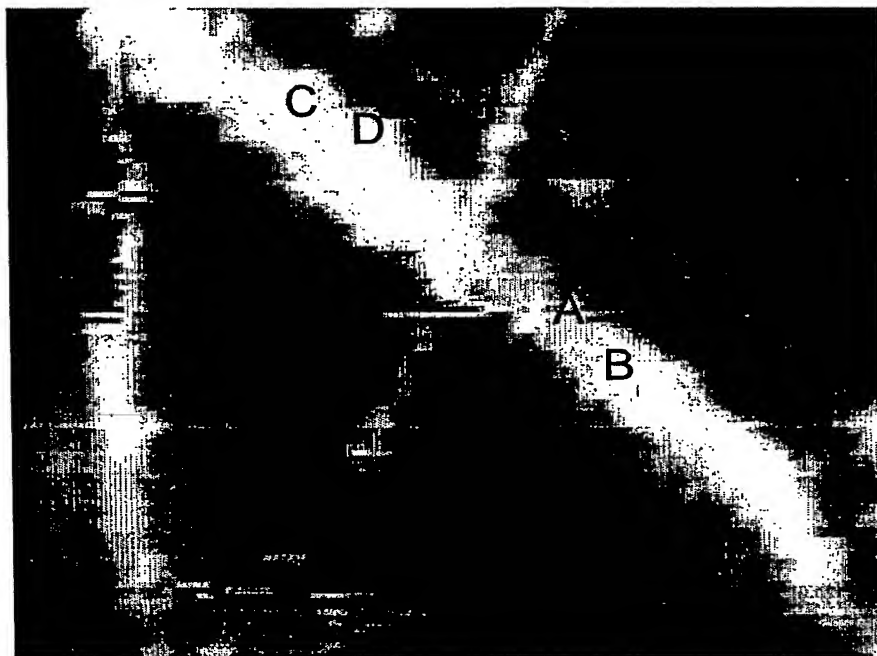


FIGURE 16B

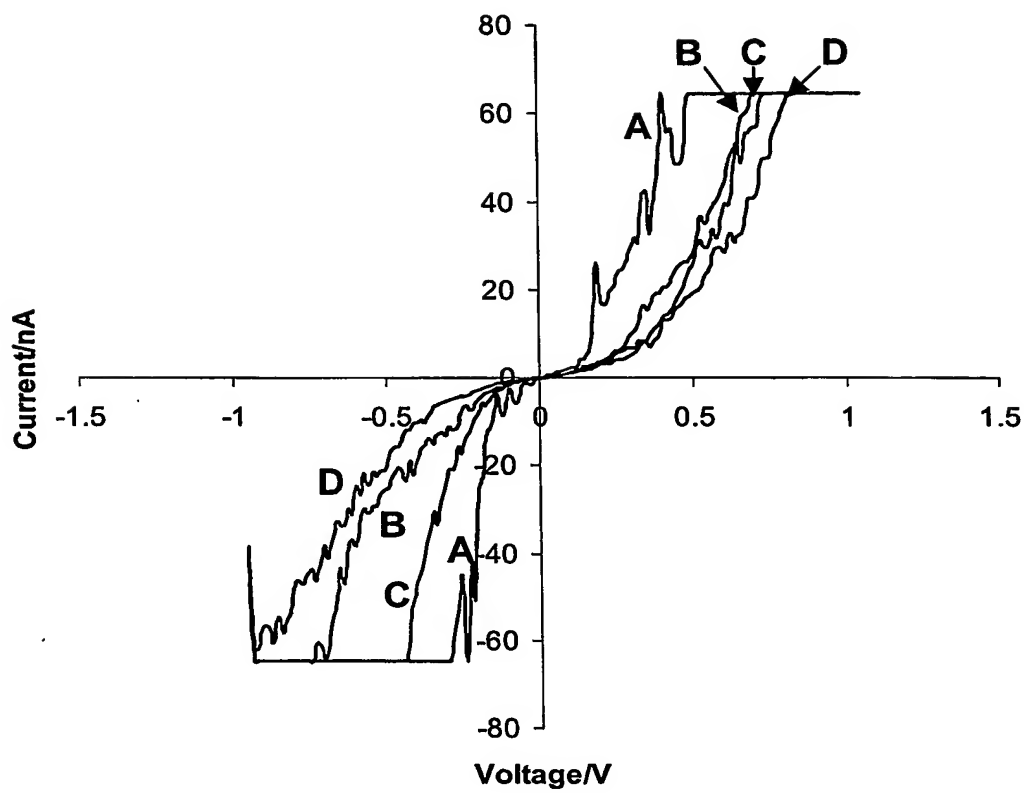
19/27



BEST AVAILABLE COPY

FIGURE 17A

20/27

**FIGURE 17B**

21/27



FIGURE 17C

BEST AVAILABLE COPY

22/27

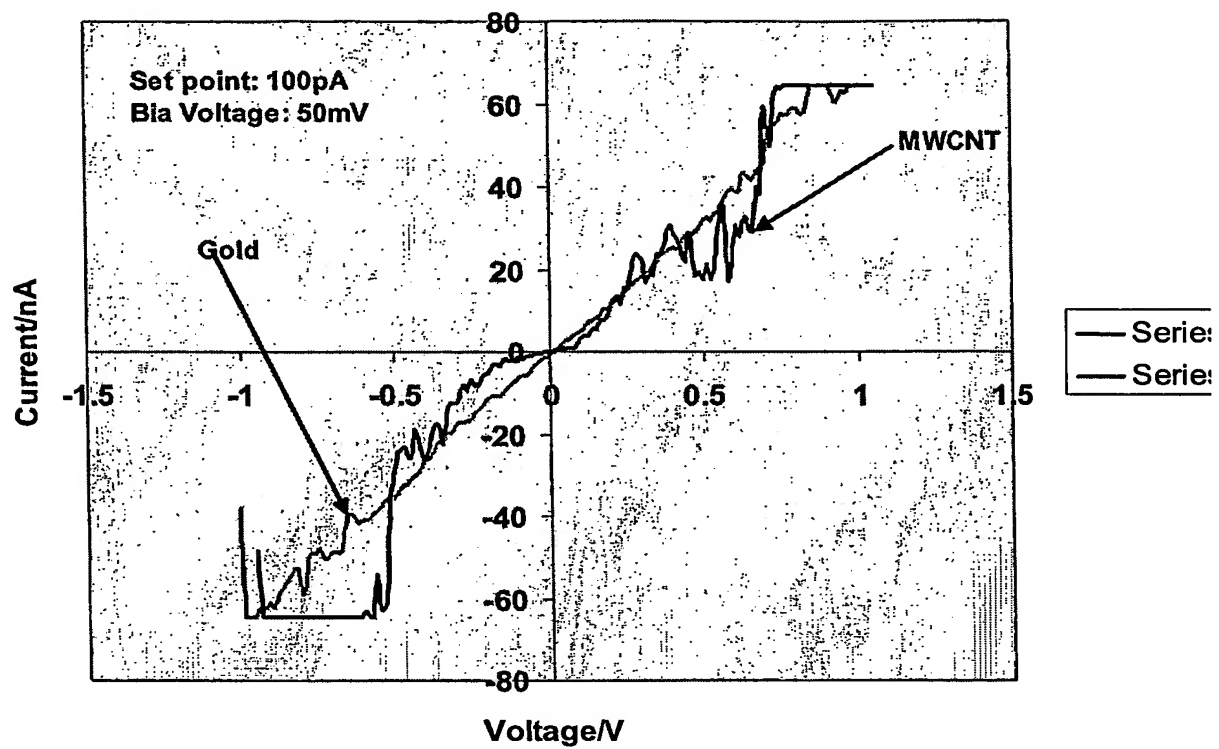
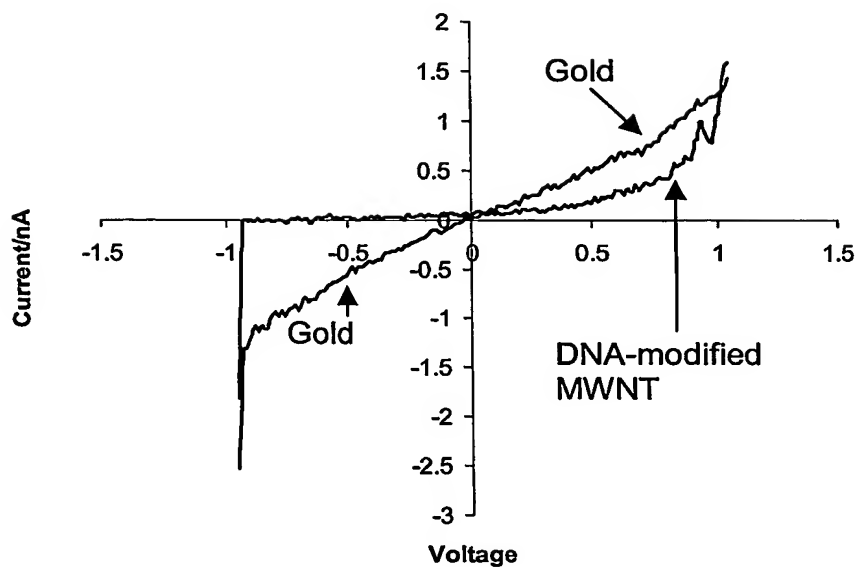
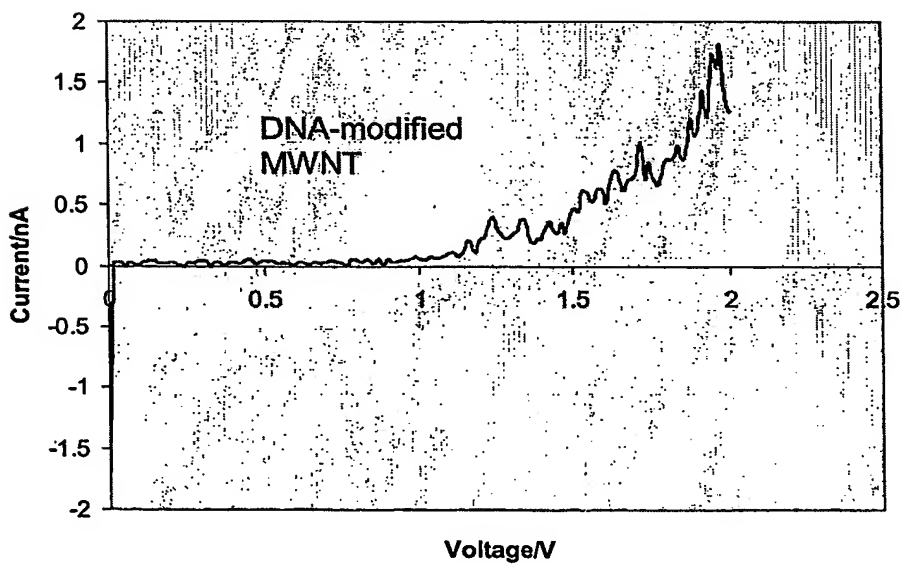


FIGURE 17D

23/27



Voltage range from -1V to 1V



Voltage range from 0-2V

FIGURE 18

24/27

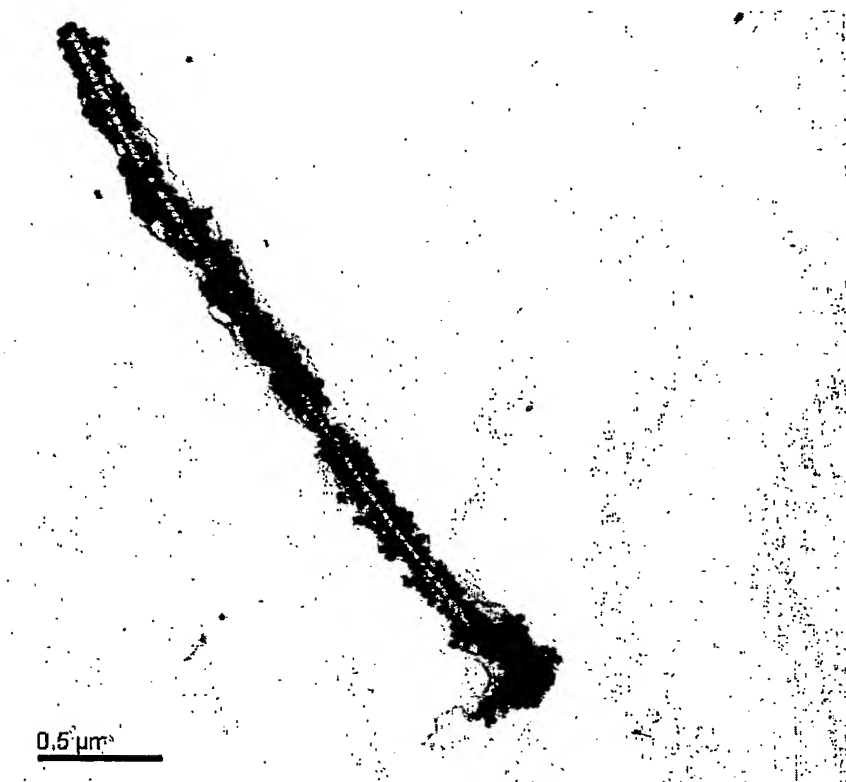


FIGURE 19A

BEST AVAILABLE COPY

25/27

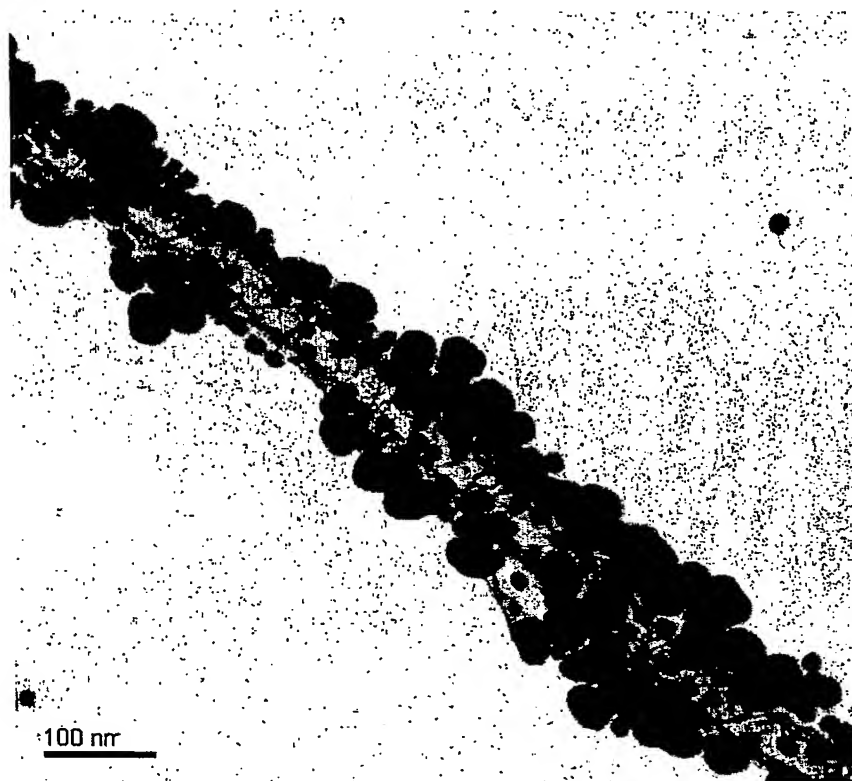


FIGURE 19B

BEST AVAILABLE COPY

26/27



BEST AVAILABLE COPY

FIGURE 19C

27/27

BEST AVAILABLE COPY



FIGURE 20